

REMARKS

Claims 1-37 are pending.

Rejections of Claims 1 – 37

Claims 1 – 37 stand rejected under 35 U.S.C. §102(b) as being unpatentable over “Java Security,” by *Oaks*. Applicant traverses these rejections for at least the following reasons, and respectfully requests that the rejections be reconsidered and withdrawn.

Before addressing each of the rejections in detail, the present Application and *Oaks* are briefly discussed. Fundamentally, *Oaks* does not disclose permission requests, as permission requests are described in the present Application. As described in the present Application, a permission request defines characteristics of permissions related to a code assembly. The permission request may specify a permission that is required by, optional to, or not to be granted to, a code assembly. As such, the permission requests can be used to filter the permission policy that will be applied to a demand from the code assembly to access a resource.

By contrast, *Oaks* describes a permission object that enables a code assembly to actually ask for permission to access a resource. As *Oaks* describes, “a permission object represents an actual permission that has been granted to that class,” or “a permission object allows us to ask if we have a specific permission.” *Oaks* provides a user-generated policy against which the permission object is

checked to determine if a code assembly has a specific permission. As such, *Oaks* does not describe permission requests that can be used to filter the policy that is ultimately used to evaluate an actual demand for permission.

With the foregoing in mind, each of the claims is now discussed in detail.

Claim 1 is reproduced here:

1. A method for processing a permission set associated with a code assembly received from a resource location to control execution of the code assembly, the method comprising:

- receiving the permission set including at least one permission associated with the code assembly;
- receiving a permission request set in association with the code assembly; and
- filtering the permission set based on the permission request set to control execution of the code assembly.

Claim 1 recites, in part, filtering a permission set based on a permission request set to control execution of a code assembly. The Office relies on *Oaks*, pages 90 – 93 and 100, in its rejection of claim 1. In general, the *Oaks* system enables administrators and end users to define in a file (i.e., the PolicyFile), the security policy that is applied to each code assembly. See *Oaks* at p. 110. The policy file maps code sources to sets of permissions. See *id* at 112. When a

1 permission is requested, the requested permission is checked against the policy file
2 to determine if the associated operation should be permitted. See *id* at 116.

3 Oaks' system is akin to conventional approaches discussed in the
4 Background of the present Application. For example, *Oaks*' policy file includes
5 entries such as:

```
6 grant codeBase http://www.xyz.com/ {  
7     permission java.io.FilePermsion "${user.home}${/}docs${/}-  
8     ", "read, write, delete";};
```

9 The foregoing entry means that any code loaded from the top-level directory
10 of *www.xyz.com* is granted permission to use any files under the user's *docs*
11 directory. See *Oaks* at p. 112. *Oaks*' approach corresponds closely to the example
12 described in the *Background* of the present *Application* at page 2, lines 11 – 24.
13 As discussed in the *Background*, in such conventional approaches, security
14 policies are static, remaining fixed over long periods of time. See *Application*, p.
15 3.
16

17 By contrast, claim 1 includes filtering a permission set based on a
18 permission request set. *Oaks*' policy file is not filtered based on a permission
19 request set. Applicants' have thoroughly reviewed *Oaks*' disclosure and can find
20 no teaching of filtering a permission set (or a security policy) based on a
21 permission request set. For at least this reason, *Oaks* fails to teach or suggest all of
22 the elements of claim 1.
23

24 Claims 2 – 19 each depend from claim 1 in some manner. Therefore claims
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1 2 – 19 are believed to be allowable for at least the same reasons as claim 1. In
2 addition, each of claims 2 – 19 has its own limitations that further distinguish it
3 from *Oaks*.

4 For example, claim 2 is reproduced here:

5
6 2. The method of claim 1 wherein the filtering operation
7 comprises:
8

9 generating a permission grant set from a subset of the
10 permission set, the subset specified by the permission request set.
11

12 Claim 2 recites, in part, generating a permission grant set from a subset of
13 the permission set, the subset specified by the permission request set. *Oaks*'
14 security policy (i.e., the PolicyFile) includes grant entries that map permissions to
15 particular code sources. The grant entries are constructed by hand by an
16 administrator or an end user. See *Oaks* at p. 110 and 114. Because the grant
17 entries are constructed by hand, the grant entries cannot be filtered based on a
18 permission request set associated with a code assembly. Thus, *Oaks*' grant entries
19 are not generated from a subset of a permission set that is specified by a
20 permission request set associated with a code assembly.
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23 The Office relies on page 101 of *Oaks* in its rejection of claim 2. Page 101
24 of *Oaks* describes an example of how a permission can be created, but not how a
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1 grant entry is created in the policy file. *Oaks'* "Permission class is really used only
2 to create your own types of permissions." See *Oaks* at 99 (emphasis added). The
3 exemplary code on page 101 shows how a Permission class is created; that is, by
4 creating the name of the Permission class (e.g., XYZPayrollPermission), and the
5 types of actions defined for the permission (e.g., "view", and "update"). *Oaks'*
6 permission object is used to ask if a code assembly has a specific permission. See
7 *id* at 93. The permission name and action are used at run-time to check against the
8 policy file to determine if the particular permission can perform the requested
9 action. This is done by calling the "checkPermission()" method. See *id* at
10 117.
11

12 For at least the foregoing reasons claim 2 is neither disclosed nor suggested
13 by *Oaks*.
14

15 In addition, claim 19 recites:

16 19. The method of claim 1 wherein the operation of
17 receiving a permission request set comprises:
18 retrieving the permission request set in a network
19 communication distinct from a network communication in which the
20 code assembly is received.
21

22
23 The Office asserts that retrieving a permission request set in a network
24 communication distinct from a network communication in which the code
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1 assembly is received is disclosed at page 93 in *Oaks*. Applicants have thoroughly
2 reviewed page 93 of *Oaks* but are unable to find a disclosure of the subject matter
3 of claim 19. Under the heading "The CodeSource Class", *Oaks* discusses that
4 there could be a different code source for each class. However, *Oaks* does not
5 discuss retrieving a permission request set in a network communication distinct
6 from a network communication in which the code assembly is received, as is
7 discussed in claim 19.
8

9 For at least the foregoing reasons claim 19 is neither disclosed nor
10 suggested by *Oaks*.

11 Turning to claim 20, claim 20 is reproduced here:

12
13 20. A policy manager module for processing a permission
14 set associated with a code assembly received from a resource
15 location to control execution of the code assembly, the policy
16 manager module comprising:
17

18 a filter receiving the permission set and a permission request
19 set associated with the code assembly and filtering the permission set
20 based on the permission request set to control execution of the code
21 assembly.
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1 Claim 20 recites in part, a filter receiving a permission set and a permission
2 request set associated with the code assembly and filtering the permission set
3 based on the permission request set to control execution of the code assembly. As
4 discussed above with regard to claim 1, *Oaks'* security policy is embodied in a
5 policy file that is generated by a user or administrator. *Oaks'* policy file includes
6 the grant entries that specify which code sources are granted what permissions.
7 Although a user can direct which policy file is used, the grant entries of the policy
8 file are not filtered. As discussed above, *Oaks'* static grant entries are checked
9 against a permission request at run-time to determine whether a requested action
10 can be taken.
11

12 For at least the foregoing reason, *Oaks* fails to teach or suggest all the
13 limitations of claim 20. Claim 20 is therefore believed to be allowable.
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15 Claims 21 – 32 each depends from claim 20 in some manner. Claims 21 –
16 32 are therefore believed to be allowable for at least the same reasons as claim 20.

17 Referring to claims 33 and 34, these claims are reproduced here:
18

19 33. A computer data signal embodied in a carrier wave by
20 a computing system and encoding a computer program for executing
21 a computer process processing a permission set associated with a
22 code assembly received from a resource location to control execution
23 of the code assembly, the computer process comprising:
24
25

1 receiving the permission set including at least one permission
2 associated with the code assembly;

3 receiving a permission request set in association with the code
4 assembly; and

5 filtering the permission set based on the permission request
6 set to control execution of the code assembly.

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9 34. A computer program storage medium readable by a
10 computer system and encoding a computer program for executing a
11 computer process processing a permission set associated with a code
12 assembly received from a resource location, the computer process
13 comprising:

14 receiving the permission set including at least one permission
15 associated with the code assembly;

16 receiving a permission request set in association with the code
17 assembly; and

18 filtering the permission set based on the permission request
19 set to control execution of the code assembly.
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23 Claims 33 and 34 both recite in part, filtering a permission set based on the
24 permission request set to control execution of a code assembly associated with the
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1 permission request set. As discussed above with regard to claim 1, *Oaks'* security
2 policy is embodied in a policy file that is generated by a user or administrator.
3 *Oaks'* policy file includes the grant entries that specify which code sources are
4 granted what permissions. Although a user can direct which policy file is used, the
5 grant entries of the policy file are not filtered. As discussed above, *Oaks'* static
6 grant entries are checked against a permission request at run-time to determine
7 whether a requested action can be taken.

8 For at least these reasons, *Oaks* fails to teach or suggest all the claim
9 limitations of either of claims 33 and 34. Therefore, claims 33 and 34 are believed
10 to be allowable.

11 Referring to claim 35, this claim is reproduced here:

12 35. A computer program product encoding a computer
13 program for executing on a computer system a computer process
14 processing a permission set associated with a code assembly received
15 from a resource location to control execution of the code assembly,
16 the computer process comprising:
17

18 defining a code group collection based on a security policy
19 specification, the code group collection including one or more code
20 groups;
21

22 receiving evidence associated with the code assembly;

23 evaluating membership of the code assembly in the one or
24 more code groups, based on the evidence;
25

1 generating the permission set based on the membership of the
2 code assembly in the one or more code groups;
3 receiving the permission set including at least one permission
4 associated with the code assembly;
5 receiving a permission request set in association with the code
6 assembly; and
7 computing a logical set operation on the permission set and
8 the permission request set to generate a permission grant set.
9

10 Claim 35 recites in part, computing a logical set operation on the permission
11 set and the permission request set to generate a permission grant set. As discussed
12 above, *Oaks*' permission grant entries are listed in a policy file that is generated by
13 a user or system administrator, who map permissions to code sources. See *Oaks* at
14 112. The mapping of permissions to code sources involves simply specifying the
15 appropriate permissions for a code source. Once these grant entries are defined in
16 *Oaks*' policy file, they are static. *Oaks* neither discloses nor suggests generating
17 the permission grant set by computing a logical set operation on the permission set
18 and the permission request set.

19 For at least the foregoing reasons, *Oaks* fails to disclose or suggest all the
20 elements of claim 35. As such, claim 35 is believed to be allowable.

21 Claims 36 – 37 each depend in some manner from claim 35. Therefore,
22 claims 36 – 37 are believed to be allowable for at least the same reasons as claim 35.
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Conclusion

Claims 1 - 37 are in condition for allowance and are patentable over the cited art. Accordingly, Applicant respectfully requests that a Notice of Allowability be issued forthwith. If the Office's next anticipated action is to be anything other than issuance of a Notice of Allowability, Applicant respectfully requests a telephone call for the purpose of scheduling an interview.

Respectfully Submitted,

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